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(54) Pull-out basket for dishwashing machine

(57) The front wall (5) of the basket is provided with a handle (6) which is in the shape of a U turned upside down and has its arms (10) hinged, at a certain distance from the free end thereof and in such a manner as to be removable upon exertion of an elastic deformation force, on to fulcra (8). The arms (10) of the handle are

so arranged as to strike against resting means (13, 14) that are provided on the front wall (5) both above and below said fulcra, respectively, in such a manner that the handle is normally locked in a position which is integral with the basket.

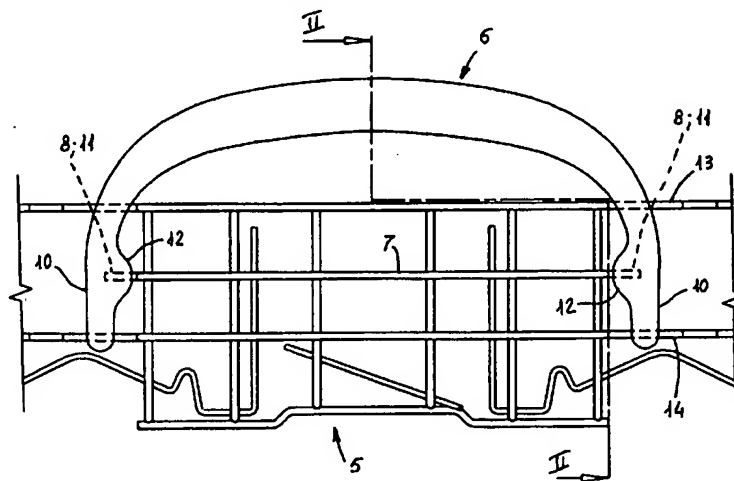


Fig. 1

Description

The present invention refers to a pull-out dish-rack basket intended for use in a household-type dishwashing machine.

Dish-rack baskets used in household dishwashing machines are generally known to be usually made out of a framework of plastic-coated metal rod-iron. They are farther mounted in the dishwashing tank of the machine through the use of sliding guide means that enable them to be pulled out in a horizontal direction in view of allowing for convenient loading and unloading of the dishes. An example of such a pull-out basket is described in GB-A-2 282 319.

In view of further facilitating the above mentioned horizontal displacement of the basket, a method is also known in the art consisting in providing the same basket with front handle means which, generally integral with the basket construction, are adapted to be easily gripped by the user, so as this is for instance illustrated in the Italian ornamental design application no. PN95 O 000006.

In a preferred manner, the handle is shaped ergonomically either through the application of a special coating of overmoulded rubber, or the like, or through the use of properly shaped plastic parts that are assembled together, by snap-fitting methods or by means of screws, so as to be then linked to the basket frame. Such a solution is for instance illustrated in the Italian ornamental design application PN95 O 000016.

It would on the other hand be desirable, and it actually is a main purpose of the present invention, to provide a pull-out basket for household-type dishwashing machines which is provided with a convenient handle that is capable of being mounted in a quick and most simple manner, without any particular processing, working and/or assembly phase being required to such a purpose.

Furthermore, two conflicting requirements are generally known to apply to dish-rack baskets intended for use in modern dishwashing machines of the afore cited kind. On the one hand, in fact, the general structure of the basket shall feature a design that is as much standardized as possible in view of limiting the production costs thereof in connection with large-scale industrial manufacturing considerations. On the other hand, however, the above mentioned handle must be shaped and/or coloured in various manners, according to the different dishwashing machine models being produced, in view of complying with the corresponding different designs and aesthetical requirements.

Therefore, it is a farther purpose of the present invention to provide a pull-out basket for household-type dishwashing machines of the afore cited kind, in which a basic standard frame can be easily associated in a selective manner with different and equivalent handles.

According to the present invention, these aims are reached in a pull-out basket for dishwashing machines

that embodies character as recited in the appended claims.

Anyway, the features and advantages of the invention will be more readily understood from the description that is given below by way of non-limiting example with reference to the accompanying drawings, in which:

- Figure 1 is a front partial view of the front wall of the basket, according to a preferred embodiment of the present invention;

- Figure 2 is a view of the front portion of the basket as seen along the section II-II of Figure 1; and

- Figure 3 is a top partial view of a head of the front portion of the basket shown in Figure 1.

With reference to the above listed Figures, the pull-out basket for dishwashing machine can be noticed to mainly comprise a frame 4 which is for instance made of a plastic-coated metal wire and has a substantially traditional, *per se* known general structure. In particular, said frame can be noticed to have a front wall 5 provided with a handle 6, which is ergonomically shaped so as to allow for convenient gripping, in view of enabling the user to cause the basket to slide along the guide means (not shown for reasons of greater simplicity) that are associated to the washing tank or vessel of a dishwashing machine.

Said handle 6 has an elastic structure made of an appropriate plastic material, and is substantially in the shape of a U turned upside down, or any similar configuration, with two opposite arms 10 which, at a certain distance from the free end thereof, are provided with respective horizontal holes 11. In a preferred manner, in correspondence of said holes 11 said arms 10 are strengthened through respective enlargements 12.

The front wall of the basket is substantially rectilinear and it preferably comprises centrally a cross-piece 7 having two opposite free ends 8 that are capable of freely fitting into the holes 11 of the handle, for which they therefore constitute respective fulcra.

Said fulcra 8 are substantially parallel to the front surface 5 of the frame and are positioned in correspondence of at least a recess 9 (two of such recesses are shown in the Figures) extending from the top along the same front surface. Furthermore, the front wall 5 comprises first and second resting means that may for instance be constituted by respective cross-pieces 13, 14 arranged above and below said fulcra 8, respectively, with respect to which they are preferably staggered in a longitudinal direction.

The handle 6 can be easily and quickly mounted on to the basket by elastically widening the arms 10 and fitting them from above into the recess 9 so as to bring the holes 11 into alignment with the fulcra 8. Upon releasing said arms 10, the handle 6 will then elastically resume its regular shape, while the fulcra 8 fit into the holes 11

of the handle. Furthermore, at least one of the arms 10 is so arranged as to be able to strike against said resting means 13, 14, so that the same handle is normally locked in a position which is integral with the basket, ie. forms a single piece therewith. The resting means 13, 14 are such as to in fact prevent the handle from rotating in any manner about its fulcra 8, while the same handle is resting substantially flush with the front surface 5 of the basket.

With a simple operation in the reverse order, the handle 6 can be elastically deformed so as to release it from the fulcra 8, and therefore to remove it, in a direction that is parallel to the virtual plane passing across the resting means 13, 14, in view of being possibly replaced.

In an advantageous manner, therefore, the frame 4 can be made to comprise a simple standard structure that is adapted to be easily completed through the addition, in the above described manner, of a handle 6 which may be made separately with different and equivalent shapes and/or colours suiting the various dishwashing machine models being produced.

It will be appreciated that the above described pull-out dishwashing machine basket may be the subject of a number of modifications without departing from the scope of the present invention, so as this is defined by the appended claims.

Claims

1. Pull-out basket for dishwashing machine, comprising a support frame whose front wall is provided with a shaped handle, **characterized in that** said handle (6) has a configuration in the shape of a U turned upside down, each one of the arms (10) thereof being hinged, at a certain distance from its own free end and in a removable manner by elastic deformation of the handle, on to a respective fulcrum (8) that is substantially parallel to said front wall (5), the latter comprising first and second resting means (13, 14) that are arranged above and below said fulcra (8), respectively, wherein at least one of said arms (10) of the handle is capable of striking against said resting means so that the handle is capable of being normally locked in a position which is integral with the basket.
2. Pull-out basket according to claim 1, **characterized in that** said at least one arm (10) of the handle (6) abuts against said first and second resting means (13, 14) on the same side.
3. Pull-out basket according to claim 2, **characterized in that** the arms (10) of the handle are arranged in correspondence of at least a recess (9) of said front surface (5), so that the handle (6) is capable of lying substantially flush with the same front surface and is capable of being removed, by releasing it from

the fulcra (8) through elastic deformation thereof, in a direction which is parallel to the virtual plane passing across said resting means (13, 14).

4. Pull-out basket according to claim 2, **characterized in that** in said resting means (13, 14) are staggered in a longitudinal direction with respect to said fulcra (8).

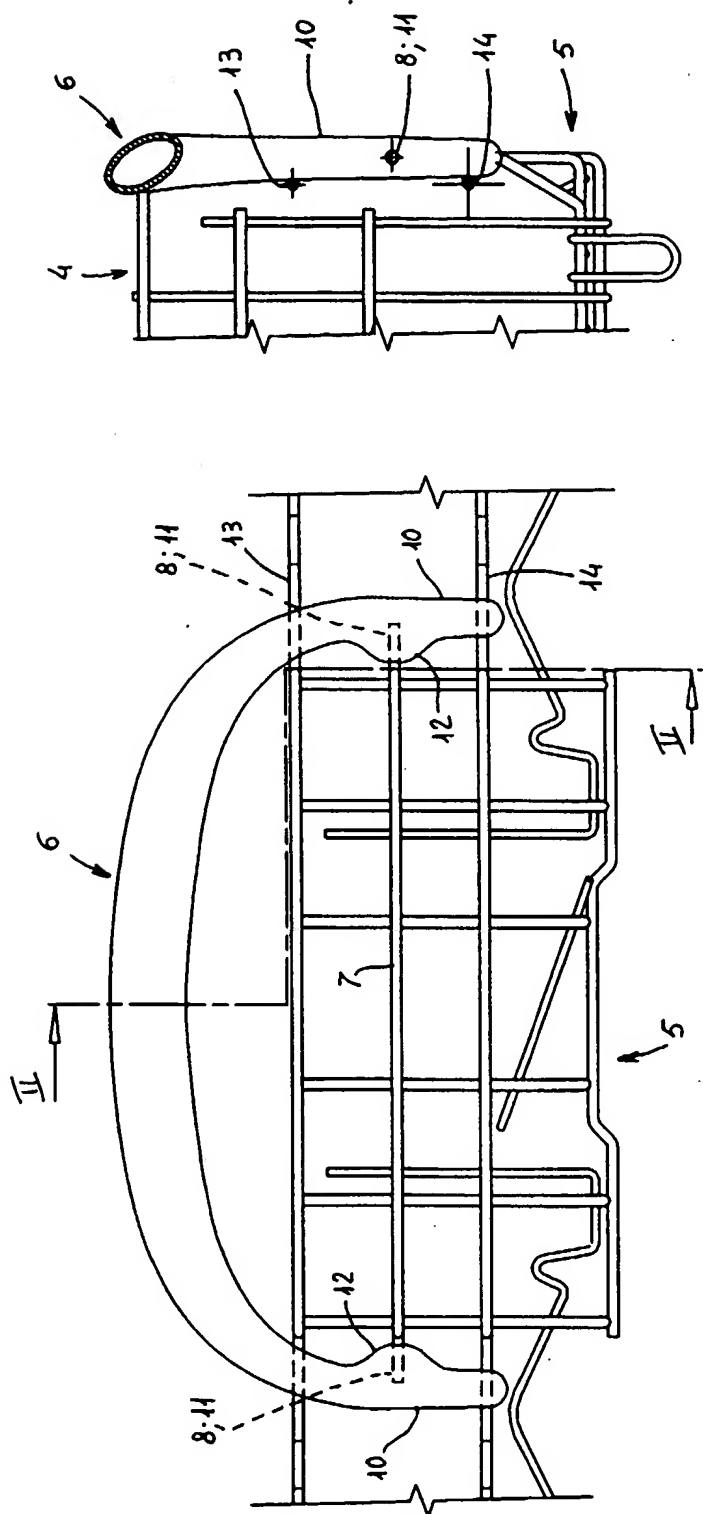


Fig. 1

Fig. 2

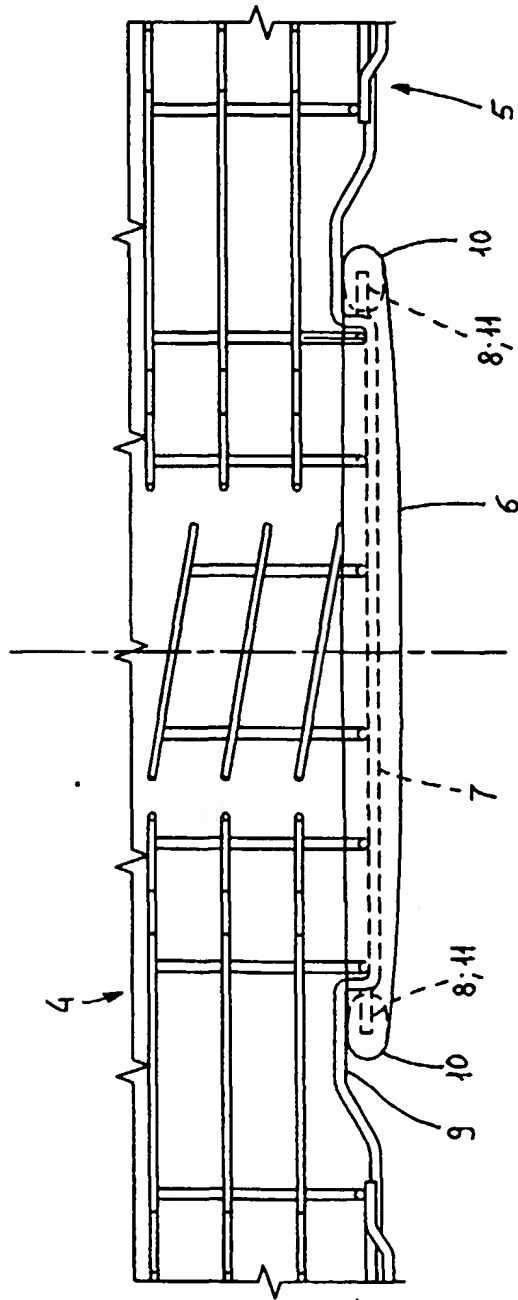


Fig. 3